
PYTHON CONDITIONAL STATEMENTS

CONDITIONAL STATEMENT

- There comes situations in real life when we need to make some decisions and based on these decisions, we decide what should we do next.
- Similar situations arise in programming also where we need to make some decisions and based on these decisions we will execute the next block of code.

- Python programming language provide there functionality to handle these types of situation using conditional statement which it also known as decision making statement like if, if else, elif, nested if, nested if else.

IF STATEMENT

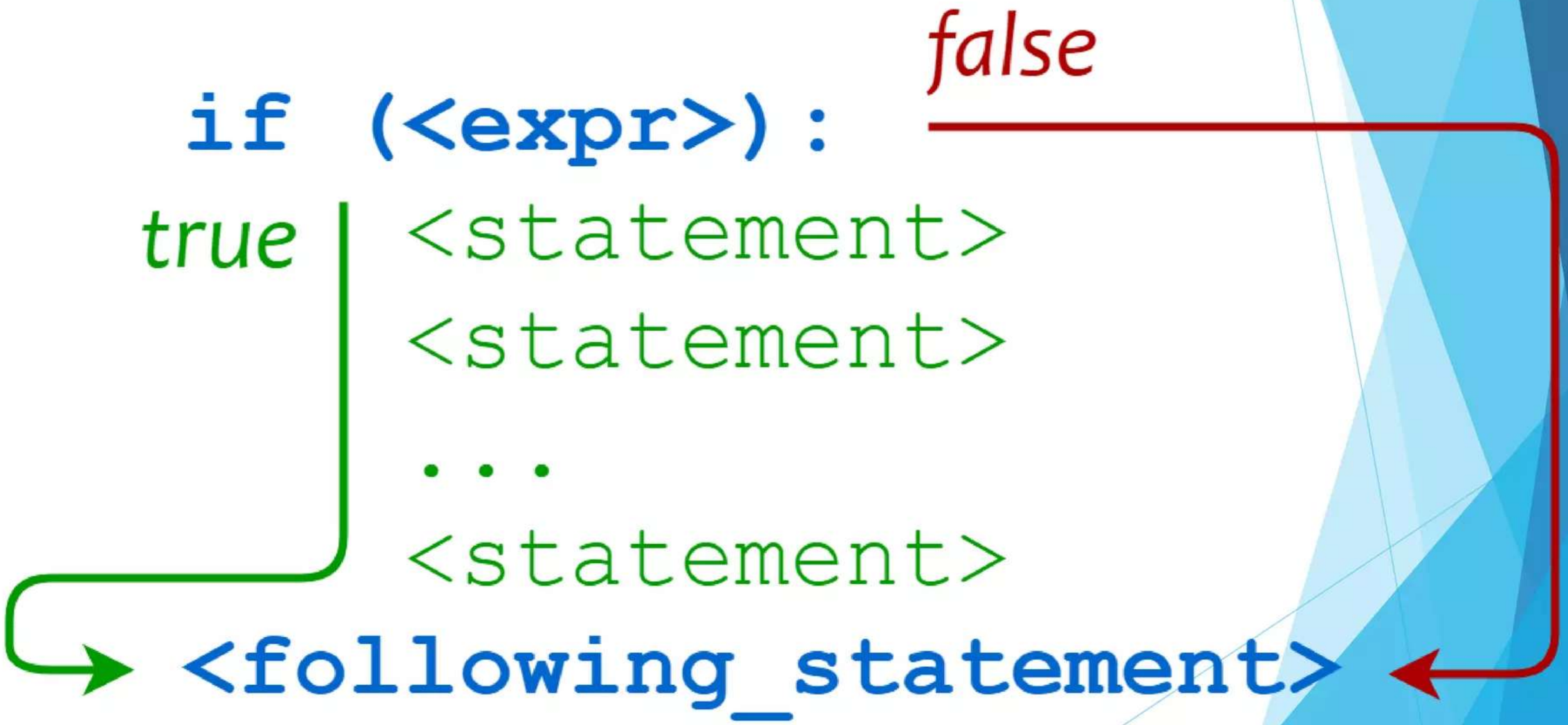
- **If statement is the most simple decision making statement.**
- **It is used to decide whether a certain statement or block of statements will be executed or not that is if a certain condition is true then a block of statement is executed otherwise not.**

Syntax:

```
if <condition> :
    #statements of if
```

It executes **if** when the condition becomes true

Introduction to the if Statement



- **The condition after evaluation will be either true or false.**
- **If the statement accepts boolean values - if the value is true then it will execute the block of statements below it otherwise not.**
- **We can use condition with bracket (‘’) also.**
- **Python uses indentation to identify a block.**

Example of if statement :

```
a = 10
if (a > 15):
    print("10 is less than 15")
print("i am not in if")
```

```
i am not in if
```

If ELSE

- The if statement alone tells us that if a condition is true it will execute a block of statements and if the condition is false it won't.
- But what if we want to do something else if the condition in false.
- Here comes the else statement.
- We can use the else statement with if statement to execute a block of code when the condition if false.

Syntax of if else :

if <condition> :

#statement

#executes this block **if** condition is true

else :

#statement

#executes this block **else** condition is true & **if** is false

Example of if else:

```
i = 20
if (i < 15):
    print("i is smaller than 15")
    print("I'm in if block")

else:
    print("i is grater than 15")
    print("I'm in else block")
print("I'm not in if and not in else block")
```

```
i is grater than 15
I'm in else block
I'm not in if and not in else block
```

Elif Statement

- In python we have one more conditional statement called “elif” statement.
- “Elif” statement is used to check multiple condition is false.
- It’s similar to an “if – else” statement and the only difference is that in “else” we will not check the condition but in “elif” we will check the condition .
- “Elif” statements are similar to “if else” statements but “elif” statements evaluate multiple condition.

Syntax of Elif Statement :

```
if <condition>:
    #set of statement to execute if condition is true
elif <condition>
     #set of statements to be executed when if condition is false and elif condition is true
else:
    #set of statement to be executed when both if and elif conditions are false
```

Example of Elif Statement :

```
i = 10
if (i == 10):
    print("Number is zero")
elif(i > 5):
    ("Number is greater than 5")
else:
    print("Number is smaller then 5")
```

```
Number is zero
```

Nested if Else Statement :

- **Nested “if else” statements mean that an “if” statement or “if else” statement is present inside another if or if else block.**
- **Python provides this feature as well, this in turn will help us to check multiple conditions in a given program.**
- **An “if” statement is present inside another “if” statement which is present inside another “if” statement and so on.**

Syntax of Nested if :

```
if <condition>
    #statements to execute if condition is true
    if <condition>
        #statements to execute if condition is
true
    #end of nested if
#end of if
```

- The above syntax clearly says that the if block will contain another if block in it and so on.

- If block can contain ‘n’ number of if block inside it.

Example of Nested If :

```
i = 10
if (i == 10):
    if(i < 20):
        print(i, "is smaller than 20")
    if(i < 21):
        print(i,"is smaller than 21")
```

```
10 is smaller than 20
10 is smaller than 21
```

Syntax of Nested If Else :

```
if <condition>:
    #statements to execute if condition is true
     if <condition>:
        #statements to execute if condition is true
     else:
            #statements to execute if condition Is false
else:
        #statements to execute if condition is false
```

Example of Nested if else :

```
i = -7
if(i == 0):
    if(i > 0):
        print("Number is possitive")
    else:
        print("Number is zero")
else:
    print("Number is negative")
```

```
Number is negative
```

THANK YOU